WHAT IS CLAIMED IS:

1. A torsion module of a torque detection device for a steering system of a motor vehicle, the torsion module comprising:

a first ring attachable to a steering wheel;

a second ring;

a spoked wheel attached on a top side to the first ring and attached on a bottom side to the second ring, the spoked wheel having a hub, a rim, and bending spokes which join the rim to the hub, the bending spokes being bendable in the event of a rotation angle offset between the hub and the rim in response to a torque applied to the steering wheel; and

a measuring sensor placed on at least one of the bending spokes, the measuring sensor being operable for generating a signal as a function of a bending force experienced by the at least one of the bending spokes as the at least one of the bending spokes bends in response to a rotation angle offset between the hub and the rim;

the spoked wheel further having bending-resistant limit stop spokes placed alternately between the bending spokes, each bending-resistant limit stop spoke having a free end that protrudes radially from the hub towards the rim, the free ends of the bending-resistant limit stop spokes being engaged with respective regions of the rim in such a manner as to permit a rotational angle offset between the hub and the rim while limiting the maximum rotation angle offset between the hub and the rim;

the hub, the rim, the bending spokes, and the bending-resistant limit stop spokes of the spoked wheel being concentric to one another;

the first and second rings having inward-pointing projections adjacent to the regions of the rim engaged with the bending-resistant limit stop spokes to form axially separated limit stops which enclose the free ends of the bending-resistant limit stop spokes on the top and bottom sides of the spoked wheel in order to prevent axial movement between the hub and the rim.

2. The torsion module of claim 1 wherein:

the measuring sensors include strip strain gauges.

3. The torsion module of claim 2 wherein:

the strip strain gauges are placed on different sides of different ones of the bending spokes.

4. The torsion module of claim 1 wherein:

the rim and the bending-resistant limit stop spokes are placed such that they are located in one plane and have the same extent in the axial direction.

5. The torsion module of claim 4 wherein:

the first ring is a spacer ring.

6. The torsion module of claim 4 wherein:

the second ring is part of a base plate of the steering wheel.

7. The torsion module of claim 1 wherein:

each region of the rim engaged with a free end of a bending-resistant limit stop spoke includes a limit stop arrangement having two bulges that project inward from the rim.

8. The torsion module of claim 7 wherein:

the bulges of each limit stop arrangement are separated at a distance from each other leaving a limit stop gap.

9. The torsion module of claim 1 wherein:

the spoked wheel is insertable into a recess of the steering wheel, the recess having an inward-directed projection forming a torque support which positively engages into the rim of the spoked wheel.